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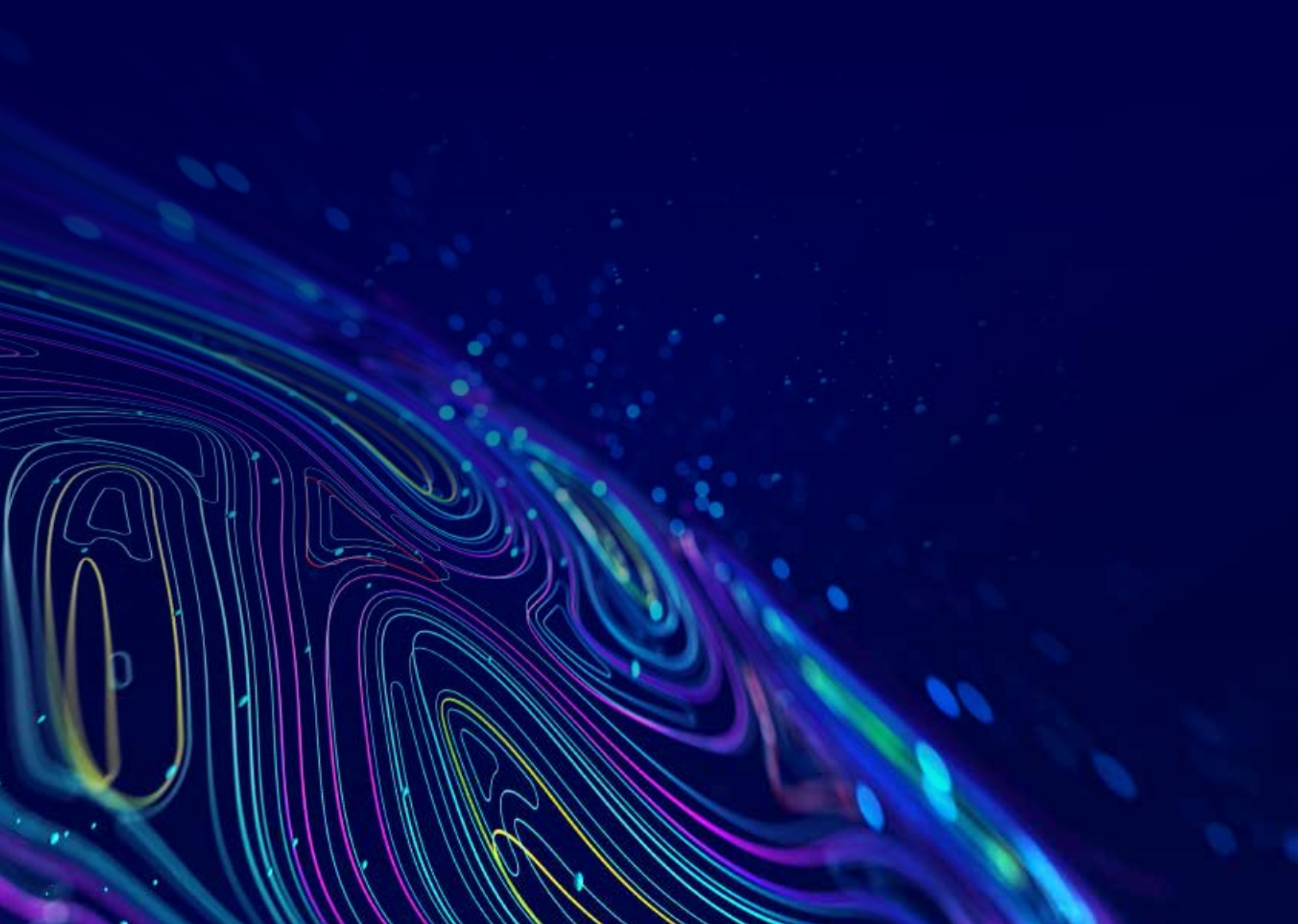
Optimizing aerospace manufacturing efficiency with AWS and Cognizant's OEE solution

Customer challenge

The multinational aerospace corporation faces significant challenges in its manufacturing landscape, where 240 machines are dedicated to producing aircraft and aviation systems. A critical issue stems from the reliance on manual data entry and OEE (overall equipment effectiveness) tracking, leading to discrepancies and often resulting in overreporting. This problem is exacerbated by the integration of data from multiple sources, which further complicates accuracy and reliability, ultimately affecting operational efficiency and decision-making processes.

AWS + Cognizant solution description

Cognizant has engineered a comprehensive OEE (overall equipment effectiveness) solution, seamlessly integrating AWS cloud services to revolutionize production efficiency. By leveraging AWS's robust cloud infrastructure, Cognizant has developed a tailored OEE model, which includes precise OEE parameters and a future-proof architecture for tracking and improving operational performance. This solution utilizes Siemens Brownfield Gateway and Insights Hub, MQTT Broker, and MQTT Bridge to ensure real-time data acquisition and analysis. Initially implemented as a proof of concept for two critical assets, the solution is set to scale across 240 machines, ensuring enhanced data accuracy and significant ROI improvements. The deployment on AWS cloud services guarantees a scalable, secure and resilient environment, enabling continuous optimization and actionable insights into production processes.

Outcomes/results

This approach enables the aerospace corporation to identify and rectify inefficiencies in real time, thereby optimizing operational effectiveness by delivering 10% improvement in OEE and driving continuous improvement. Furthermore, by realizing additional throughput potential with existing machinery, the corporation can delay significant capital expenditures, ensuring a more judicious allocation of financial resources. This not only enhances overall productivity but also allows for reinvestment into innovation and advancement within the industry.

About the partner

Cognizant (Nasdaq-100: CTSH) is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. We engineer modern businesses to improve everyday life. Our unique industry-based, consultative approach helps clients transform technology, reimagine processes and transform experiences ensuring businesses remain agile, relevant and ready to run more innovative and efficient enterprises.

With AWS as our partner, we focus on the outcomes that matter most to businesses and underpin our solutions with deep industry experience and market-leading IP. Cognizant brings more than 13,000 AWS-certified professionals, dedicated AWS-certified consultants in 43 countries, hundreds of customer launches and successes and more than 70 transformational blueprints to drive innovation beyond cloud migration.

As a premier consulting partner, Cognizant hold numerous AWS competencies, including AWS Mainframe Migration, AWS SAP, AWS Migration, AWS Financial Services, AWS Healthcare and AWS Life Sciences. Partner programs include AWS Well-Architected, AWS Managed Service Provider, AWS Marketplace Seller, AWS Solution Provider Program and AWS Public Sector Solution Provider.

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